Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS 1   Web Page for STN Seminar Schedule - N. America
 NEWS 2   JAN 02   STN pricing information for 2008 now available
 NEWS 3   JAN 16   CAS patent coverage enhanced to include exemplified
                    prophetic substances
 NEWS 4   JAN 28   USPATFULL, USPAT2, and USPATOLD enhanced with new
                    custom IPC display formats
 NEWS 5   JAN 28   MARPAT searching enhanced
 NEWS 6   JAN 28   USGENE now provides USPTO sequence data within 3 days
                    of publication
 NEWS 7   JAN 28   TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS 8   JAN 28   MEDLINE and LMEDLINE reloaded with enhancements
 NEWS 9   FEB 08   STN Express, Version 8.3, now available
 NEWS 10   FEB 20   PCI now available as a replacement to DPCI
 NEWS 11   FEB 25   IFIREF reloaded with enhancements
 NEWS 12   FEB 25   IMSPRODUCT reloaded with enhancements
 NEWS 13   FEB 29   WPINDEX/WPIDS/WPIX enhanced with ECLA and current
                    U.S. National Patent Classification
 NEWS 14   MAR 31   IFICDB, IFIPAT, and IFIUDB enhanced with new custom
                    IPC display formats
 NEWS 15   MAR 31   CAS REGISTRY enhanced with additional experimental
                    spectra
 NEWS 16   MAR 31   CA/CAplus and CASREACT patent number format for U.S.
                    applications updated
 NEWS 17   MAR 31   LPCI now available as a replacement to LDPCI
 NEWS 18   MAR 31   EMBASE, EMBAL, and LEMBASE reloaded with enhancements
 NEWS 19   APR 04   STN AnaVist, Version 1, to be discontinued
 NEWS 20   APR 15   WPIDS, WPINDEX, and WPIX enhanced with new
                    predefined hit display formats

 NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

 NEWS HOURS   STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN   Welcome Banner and News Items
 NEWS IPC8   For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement. Please note that this agreement limits use to scientific
  research. Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

```
FILE 'HOME' ENTERED AT 06:10:50 ON 28 APR 2008

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY        SESSION
FULL ESTIMATED COST                                   0.21          0.21

FILE 'REGISTRY' ENTERED AT 06:11:13 ON 28 APR 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   27 APR 2008   HIGHEST RN 1017684-24-0
DICTIONARY FILE UPDATES:  27 APR 2008   HIGHEST RN 1017684-24-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> logoff hold
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY        SESSION
FULL ESTIMATED COST                                   0.46          0.67

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 06:11:24 ON 28 APR 2008

Connecting via Winsock to STN




Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 06:17:06 ON 28 APR 2008
FILE 'REGISTRY' ENTERED AT 06:17:06 ON 28 APR 2008
COPYRIGHT (C) 2008 American Chemical Society (ACS)

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY        SESSION
FULL ESTIMATED COST                                   0.46          0.67

=>
Uploading C:\Documents and Settings\PZucker\My Documents\Examination Auxillary
files\10549322\10549322 genus formula (I).str
```
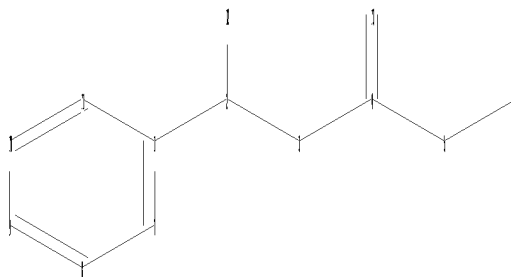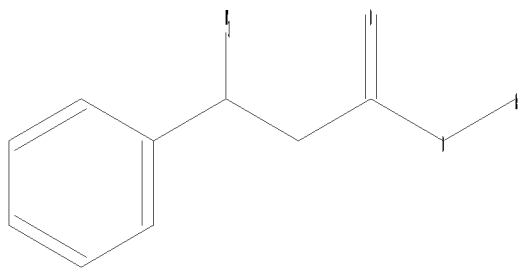
```
chain nodes :
2   3   4   5   6   12   13
ring nodes :
1   7   8   9   10   11
chain bonds :
1-2   2-3   2-12   3-4   4-5   4-13   5-6
ring bonds :
1-7   1-11   7-8   8-9   9-10   10-11
exact/norm bonds :
4-5   4-13   5-6
exact bonds :
1-2   2-3   2-12   3-4
normalized bonds :
1-7   1-11   7-8   8-9   9-10   10-11


Hydrogen count :
2:>= minimum 1   3:>= minimum 2
Match level :
1:Atom   2:CLASS   3:CLASS   4:CLASS   5:CLASS   6:CLASS   7:Atom   8:Atom   9:Atom
10:Atom   11:Atom   12:CLASS   13:CLASS
Element Count :
Node 6: Limited
     C,C2-5




L1        STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1                STR
```
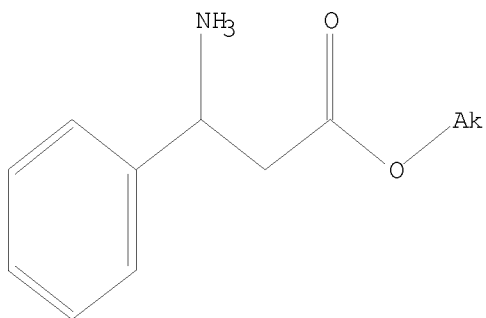

Structure attributes must be viewed using STN Express query preparation.

```
=> search l1 sss sam
SAMPLE SEARCH INITIATED 06:17:50 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    21822 TO ITERATE

  9.2% PROCESSED      2000 ITERATIONS                           0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.02

FULL FILE PROJECTIONS:  ONLINE   **COMPLETE**
                        BATCH    **COMPLETE**
PROJECTED ITERATIONS:       427597 TO    445283
PROJECTED ANSWERS:               0 TO         0

L2             0 SEA SSS SAM L1

=> search l1 sss full
FULL SEARCH INITIATED 06:18:01 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   434251 TO ITERATE

 98.6% PROCESSED   427960 ITERATIONS                            0 ANSWERS

100.0% PROCESSED   434251 ITERATIONS                            0 ANSWERS
SEARCH TIME: 00.00.23

L3             0 SEA SSS FUL L1

=> logoff hold
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                  ENTRY        SESSION
FULL ESTIMATED COST                              179.28        179.49


  SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 06:18:47 ON 28 APR 2008

Connecting via Winsock to STN




Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 07:34:48 ON 28 APR 2008
FILE 'REGISTRY' ENTERED AT 07:34:48 ON 28 APR 2008
COPYRIGHT (C) 2008 American Chemical Society (ACS)

COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                  ENTRY        SESSION
FULL ESTIMATED COST                              179.28        179.49

=> d his

     (FILE 'HOME' ENTERED AT 06:10:50 ON 28 APR 2008)

     FILE 'REGISTRY' ENTERED AT 06:11:13 ON 28 APR 2008
L1             STRUCTURE UPLOADED
L2             0 SEARCH L1 SSS SAM
```

```
L3                0 SEARCH L1 SSS FULL

=> logoff
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                    ENTRY       SESSION
FULL ESTIMATED COST                                179.74       179.95

STN INTERNATIONAL LOGOFF AT 07:35:10 ON 28 APR 2008




Connecting via Winsock to STN




Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page for STN Seminar Schedule - N. America
 NEWS  2  JAN 02   STN pricing information for 2008 now available
 NEWS  3  JAN 16   CAS patent coverage enhanced to include exemplified
                   prophetic substances
 NEWS  4  JAN 28   USPATFULL, USPAT2, and USPATOLD enhanced with new
                   custom IPC display formats
 NEWS  5  JAN 28   MARPAT searching enhanced
 NEWS  6  JAN 28   USGENE now provides USPTO sequence data within 3 days
                   of publication
 NEWS  7  JAN 28   TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS  8  JAN 28   MEDLINE and LMEDLINE reloaded with enhancements
 NEWS  9  FEB 08   STN Express, Version 8.3, now available
 NEWS 10  FEB 20   PCI now available as a replacement to DPCI
 NEWS 11  FEB 25   IFIREF reloaded with enhancements
 NEWS 12  FEB 25   IMSPRODUCT reloaded with enhancements
 NEWS 13  FEB 29   WPINDEX/WPIDS/WPIX enhanced with ECLA and current
                   U.S. National Patent Classification
 NEWS 14  MAR 31   IFICDB, IFIPAT, and IFIUDB enhanced with new custom
                   IPC display formats
 NEWS 15  MAR 31   CAS REGISTRY enhanced with additional experimental
                   spectra
 NEWS 16  MAR 31   CA/CAplus and CASREACT patent number format for U.S.
                   applications updated
 NEWS 17  MAR 31   LPCI now available as a replacement to LDPCI
 NEWS 18  MAR 31   EMBASE, EMBAL, and LEMBASE reloaded with enhancements
 NEWS 19  APR 04   STN AnaVist, Version 1, to be discontinued
 NEWS 20  APR 15   WPIDS, WPINDEX, and WPIX enhanced with new
                   predefined hit display formats
 NEWS 21  APR 28   EMBASE Controlled Term thesaurus enhanced
 NEWS 22  APR 28   IMSRESEARCH reloaded with enhancements

 NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008
```

```
=> file reg
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                     ENTRY       SESSION
FULL ESTIMATED COST                                   0.21         0.21
```

```
=>
```
Uploading C:\Documents and Settings\PZucker\My Documents\Examination Auxillary
files\10549322\10549322 genus formula (I).str

chain nodes :

```
2   3   4   5   6   12   13
ring nodes :
1   7   8   9   10   11
chain bonds :
1-2   2-3   2-12   3-4   4-5   4-13   5-6
ring bonds :
1-7   1-11   7-8   8-9   9-10   10-11
exact/norm bonds :
4-5   4-13   5-6
exact bonds :
1-2   2-3   2-12   3-4
normalized bonds :
1-7   1-11   7-8   8-9   9-10   10-11


Hydrogen count :
2:>= minimum 1  3:>= minimum 2
Match level :
1:Atom  2:CLASS  3:CLASS  4:CLASS  5:CLASS  6:CLASS  7:Atom  8:Atom  9:Atom
10:Atom  11:Atom  12:CLASS  13:CLASS
Element Count :
Node 6: Limited
     C,C2-5




L1          STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1                    STR
```



```
Structure attributes must be viewed using STN Express query preparation.


=> search l1 sss sam
SAMPLE SEARCH INITIATED 13:36:14 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    21884 TO ITERATE

  9.1% PROCESSED     2000 ITERATIONS                          0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:      428825 TO    446535
```

PROJECTED ANSWERS: 0 TO   0

L2   0 SEA SSS SAM L1

=> search l1 sss full
FULL SEARCH INITIATED 13:36:29 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   435397 TO ITERATE

100.0% PROCESSED   435397 ITERATIONS   0 ANSWERS
SEARCH TIME: 00.00.16

L3   0 SEA SSS FUL L1

=> logoff hold
COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                    ENTRY   SESSION
FULL ESTIMATED COST   179.28   179.49

  SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 13:37:02 ON 08 MAY 2008

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 13:45:43 ON 08 MAY 2008
FILE 'REGISTRY' ENTERED AT 13:45:43 ON 08 MAY 2008
COPYRIGHT (C) 2008 American Chemical Society (ACS)

COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                    ENTRY   SESSION
FULL ESTIMATED COST   179.74   179.95

=>
Uploading C:\Documents and Settings\PZucker\My Documents\Examination Auxillary
files\10549322\10549322 acid genus formula (I).str
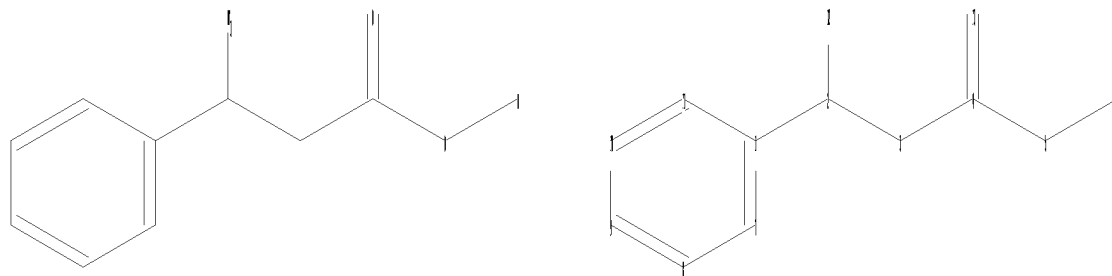
chain nodes :
2 3 4 5 6 12 13
ring nodes :
1 7 8 9 10 11
chain bonds :
1-2 2-3 2-12 3-4 4-5 4-13 5-6
ring bonds :
1-7 1-11 7-8 8-9 9-10 10-11

exact bonds :
1-2 2-3 2-12 3-4 5-6
normalized bonds :
1-7 1-11 4-5 4-13 7-8 8-9 9-10 10-11

Hydrogen count :
2:>= minimum 1 3:>= minimum 2
Match level :
1:Atom 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:Atom 8:Atom 9:Atom
10:Atom 11:Atom 12:CLASS 13:CLASS
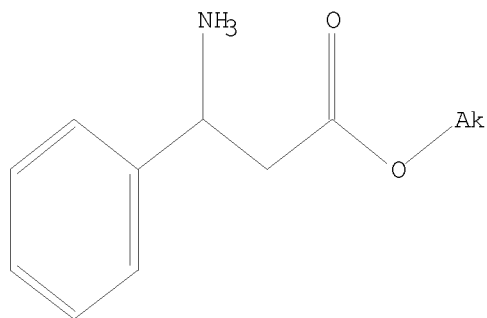Element Count :
Node 6: Limited
    C,C2-5

L4   STRUCTURE UPLOADED

=> d l4
L4 HAS NO ANSWERS
L4   STR
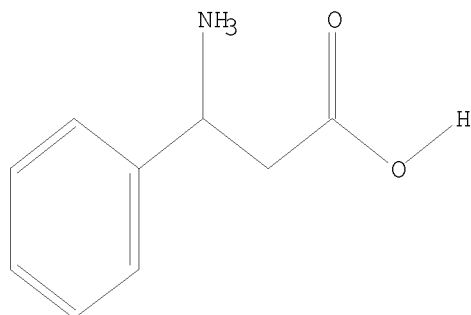
Structure attributes must be viewed using STN Express query preparation.

=> search l4 sss sam
SAMPLE SEARCH INITIATED 13:46:42 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -   12065 TO ITERATE

 16.6% PROCESSED   2000 ITERATIONS   0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS: 234718 TO   247882
PROJECTED ANSWERS: 0 TO   0

L5   0 SEA SSS SAM L4

=> search l4 sss full
FULL SEARCH INITIATED 13:46:51 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   241376 TO ITERATE

100.0% PROCESSED   241376 ITERATIONS   0 ANSWERS

```
SEARCH TIME: 00.00.02


L6              0 SEA SSS FUL L4


=> e 3-phenylpropanoic acid/cn
E1          1       3-PHENYLPROPANETHIOL/CN
E2          1       3-PHENYLPROPANOATE-2,2-D2/CN
E3          1 --> 3-PHENYLPROPANOIC ACID/CN
E4          1       3-PHENYLPROPANOIC ACID CHLORIDE/CN
E5          1       3-PHENYLPROPANOIC ACID ETHYL ESTER/CN
E6          1       3-PHENYLPROPANOIC ACID HYDRAZIDE/CN
E7          1       3-PHENYLPROPANOIC ACID METHYL ESTER/CN
E8          1       3-PHENYLPROPANOIC ACID N-((5-HYDROXY-4-OXO-4H-PYRAN-2-YL)MET
                    HYL)AMIDE/CN
E9          1       3-PHENYLPROPANOIC ACID N-((5-HYDROXY-4-THIOXO-4H-PYRAN-2-YL)
                    METHYL)AMIDE/CN
E10         1       3-PHENYLPROPANOIC-1-13C ACID/CN
E11         1       3-PHENYLPROPANOL/CN
E12         1       3-PHENYLPROPANONITRILE/CN


=> e 3-aminopropanoic acid/cn
E1          1       3-AMINOPROPANETHIOL-35S/CN
E2          1       3-AMINOPROPANOATE ION/CN
E3          1 --> 3-AMINOPROPANOIC ACID/CN
E4          1       3-AMINOPROPANOIC ACID BENZYL ESTER/CN
E5          1       3-AMINOPROPANOIC ACID ETHYL ESTER HYDROCHLORIDE/CN
E6          1       3-AMINOPROPANOIC ACID HYDROCHLORIDE/CN
E7          1       3-AMINOPROPANOIC ACID METHYL ESTER/CN
E8          1       3-AMINOPROPANOIC ACID TERT-BUTYL ESTER HYDROCHLORIDE/CN
E9          1       3-AMINOPROPANOL/CN
E10         1       3-AMINOPROPANOL CYCLIC BUTANEBORONATE/CN
E11         1       3-AMINOPROPANOL DEHYDROGENASE/CN
E12         1       3-AMINOPROPANOL HYDROCHLORIDE/CN


=> e 3-phenyl-3-aminopropanoic acid/cn
E1          1       3-PHENYL-3-(TRIS(4-TOLYL)GERMYL)PROPANOIC ACID/CN
E2          1       3-PHENYL-3-AMINOACRYLONITRILE/CN
E3          0 --> 3-PHENYL-3-AMINOPROPANOIC ACID/CN
E4          1       3-PHENYL-3-AZABICYCLO(3.2.2)NONANE/CN
E5          1       3-PHENYL-3-AZABICYCLO(3.2.2)NONANE, PERCHLORATE/CN
E6          1       3-PHENYL-3-AZABICYCLO(3.2.2)NONANE, PICRATE/CN
E7          1       3-PHENYL-3-AZAPENTANE-1,5-DIOL/CN
E8          1       3-PHENYL-3-BENZYL-N-METHYLSUCCINIMIDE/CN
E9          1       3-PHENYL-3-BOC-AMINOPROPIONALDEHYDE/CN
E10         1       3-PHENYL-3-BUTEN-1-OL/CN
E11         1       3-PHENYL-3-BUTEN-2-OL/CN
E12         1       3-PHENYL-3-BUTEN-2-ONE/CN


=> logoff hold
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                ENTRY        SESSION
FULL ESTIMATED COST                            359.94        360.15


 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 13:48:57 ON 08 MAY 2008


Connecting via Winsock to STN




Welcome to STN International!  Enter x:x
```

COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                     ENTRY   SESSION
FULL ESTIMATED COST   359.94   360.15

=> file caplus
COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                     ENTRY   SESSION
FULL ESTIMATED COST   360.86   361.07

=> 614-19-7
   REG1stRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L8   365 L7

=> hydrolase or lipase or esterase
         24356 HYDROLASE
          9218 HYDROLASES
         28918 HYDROLASE
                 (HYDROLASE OR HYDROLASES)
         52101 LIPASE

```
        9026 LIPASES
       53506 LIPASE
             (LIPASE OR LIPASES)
       33471 ESTERASE
       11504 ESTERASES
       38131 ESTERASE
             (ESTERASE OR ESTERASES)
L9      112871 HYDROLASE OR LIPASE OR ESTERASE

=> l8 and l9
L10          5 L8 AND L9

=> d l10 1-5 ti

L10   ANSWER 1 OF 5   CAPLUS   COPYRIGHT 2008 ACS on STN
TI    Cloning and characterization of a novel β-transaminase from
      Mesorhizobium sp. strain LUK: a new biocatalyst for the synthesis of
      enantiomerically pure β-amino acids

L10   ANSWER 2 OF 5   CAPLUS   COPYRIGHT 2008 ACS on STN
TI    Lipase-catalyzed resolution of chiral 1,3-amino alcohols:
      application in the asymmetric synthesis of (S)-dapoxetine

L10   ANSWER 3 OF 5   CAPLUS   COPYRIGHT 2008 ACS on STN
TI    Enzymatic resolution of N-protected-β3-amino methyl esters, using
      lipase B from Candida antarctica

L10   ANSWER 4 OF 5   CAPLUS   COPYRIGHT 2008 ACS on STN
TI    Preparation of substituted β-amino acid derivatives useful as
      platelet aggregation inhibitors

L10   ANSWER 5 OF 5   CAPLUS   COPYRIGHT 2008 ACS on STN
TI    Comparative analysis of the effect of low-molecular-weight substrate
      fragments and their analogs on the activity of phospholipases A2 from pig
      pancreas and cobra and bee venoms


=> d l10 1-5 ti fbib abs

L10   ANSWER 1 OF 5   CAPLUS   COPYRIGHT 2008 ACS on STN
TI    Cloning and characterization of a novel β-transaminase from
      Mesorhizobium sp. strain LUK: a new biocatalyst for the synthesis of
      enantiomerically pure β-amino acids
AN    2007:362254  CAPLUS
DN    147:25735
TI    Cloning and characterization of a novel β-transaminase from
      Mesorhizobium sp. strain LUK: a new biocatalyst for the synthesis of
      enantiomerically pure β-amino acids
AU    Kim, Juhan; Kyung, Dohyun; Yun, Hyungdon; Cho, Byung-Kwan; Seo, Joo-Hyun;
      Cha, Minho; Kim, Byung-Gee
CS    Institute for Molecular Biology and Genetics and School of Chemical and
      Biological Engineering, Seoul National University, Seoul, 151-742, S.
      Korea
SO    Applied and Environmental Microbiology (2007), 73(6), 1772-1782
      CODEN: AEMIDF; ISSN: 0099-2240
PB    American Society for Microbiology
DT    Journal
LA    English
AB    A novel β-transaminase gene was cloned from Mesorhizobium sp. strain
      LUK.  By using N-terminal sequence and an internal protein sequence, a
      digoxigenin-labeled probe was made for nonradioactive hybridization, and a
      2.5-kb gene fragment was obtained by colony hybridization of a cosmid
```

library. Through Southern blotting and sequence anal. of the selected
cosmid clone, the structural gene of the enzyme (1335 bp) was identified,
which encodes a protein of 47,244 Da with a theor. pI of 6.2. The deduced
amino acid sequence of the β-transaminase showed the highest sequence
similarity with glutamate-1-semialdehyde aminomutase of transaminase
subgroup II. The β-transaminase showed higher activities toward
D-β-aminocarboxylic acids such as 3-aminobutyric acid,
3-amino-5-methylhexanoic acid, and 3-amino-3-phenylpropionic acid. The
β-transaminase has an unusually broad specificity for amino acceptors
such as pyruvate and α-ketoglutarate/oxaloacetate. The
enantioselectivity of the enzyme suggested that the recognition mode of
β-aminocarboxylic acids in the active site is reversed relative to
that of α-amino acids. After comparison of its primary structure
with transaminase subgroup II enzymes, it was proposed that R43 interacts
with the carboxylate group of the β-aminocarboxylic acids and the
carboxylate group on the side chain of dicarboxylic α-keto acids
such as α-ketoglutarate and oxaloacetate. R404 is another conserved
residue, which interacts with the α-carboxylate group of the
α-amino acids and α-keto acids. The β-transaminase was
used for the asym. synthesis of enantiomerically pure β-
aminocarboxylic acids. (3S)-Amino-3-phenylpropionic acid was produced
from the ketocarboxylic acid ester substrate by coupled reaction with a
lipase using 3-aminobutyric acid as amino donor.
RE.CNT 56   THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
TI   Lipase-catalyzed resolution of chiral 1,3-amino alcohols:
     application in the asymmetric synthesis of (S)-dapoxetine
AN   2006:374475 CAPLUS
DN   145:6664
TI   Lipase-catalyzed resolution of chiral 1,3-amino alcohols:
     application in the asymmetric synthesis of (S)-dapoxetine
AU   Torre, Oliver; Gotor-Fernandez, Vicente; Gotor, Vicente
CS   Departamento de Quimica Organica e Inorganica, Universidad de Oviedo,
     Oviedo, 33071, Spain
SO   Tetrahedron: Asymmetry (2006), 17(5), 860-866
     CODEN: TASYE3; ISSN: 0957-4166
PB   Elsevier B.V.
DT   Journal
LA   English
OS   CASREACT 145:6664
AB   The enzymic resolution of 3-amino-3-phenylpropan-1-ol derivs. has been
     studied through acylation processes. Candida antarctica lipase
     A (CAL-A) has been identified as the best biocatalyst for the
     transesterification reaction of 3-amino-3-phenyl-1-tert-
     butyldimethylsilyloxy-propan-1-ol using Et methoxyacetate as acylating
     agent and tert-Bu Me ether as solvent. This enzymic study has allowed us
     to obtain a valuable intermediate for the production of (S)-dapoxetine, which
     has been synthesized in good overall yield and high enantiomeric excess.
RE.CNT 30   THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
TI   Enzymatic resolution of N-protected-β3-amino methyl esters, using
     lipase B from Candida antarctica
AN   2005:124717 CAPLUS
DN   142:355544
TI   Enzymatic resolution of N-protected-β3-amino methyl esters, using
     lipase B from Candida antarctica
AU   Flores-Sanchez, Patricia; Escalante, Jaime; Castillo, Edmundo
CS   Centro de Investigaciones Quimicas, Universidad Autonoma del Estado de

```
        Morelos, Cuernavaca, Morelos, C.P. 62210, Mex.
SO      Tetrahedron: Asymmetry (2005), 16(3), 629-634
        CODEN: TASYE3; ISSN: 0957-4166
PB      Elsevier B.V.
DT      Journal
LA      English
OS      CASREACT 142:355544
AB      Racemic β3-amino Me esters bearing the amine function protected with
        COPh (Bz), benzyloxycarbonyl(Cbz), tert-butoxycarbonyl (Boc),
        9-fluorenylmethyloxycarbonyl(Fmoc) and as aminobenzamide, were resolved by
        enantiospecific transesterifications catalyzed by lipase B from
        Candida antarctica.  The reactions proceeded with a high conversion and
        yielded enantiomerically pure enantiomers.
RE.CNT  33    THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


L10  ANSWER 4 OF 5  CAPLUS  COPYRIGHT 2008 ACS on STN
TI      Preparation of substituted β-amino acid derivatives useful as
        platelet aggregation inhibitors
AN      1993:539779  CAPLUS
DN      119:139779
OREF 119:25107a,25110a
TI      Preparation of substituted β-amino acid derivatives useful as
        platelet aggregation inhibitors
IN      Bovy, Philippe Roger; Rico, Joseph Gerace; Rogers, Thomas Edward; Tjoeng,
        Foe Siong; Zablocki, Jeffery Alan
PA      Monsanto Co., USA; G.D. Searle and Co.
SO      PCT Int. Appl., 140 pp.
        CODEN: PIXXD2
DT      Patent
LA      English
FAN.CNT 4
        PATENT NO.           KIND   DATE       APPLICATION NO.        DATE
        --------------       ----   --------   --------------------   --------
PI   WO 9307867              A1     19930429   WO 1992-US8512         19921006
            W:  AU, BB, BG, BR, CA, CS, FI, HU, JP, KR, LK, MG, MN, MW, NO, PL,
                RO, RU, SD
            RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF,
                BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG
                                               US 1991-777811        A  19911015
                                               US 1992-866933        A  19920410
     US 5239113              A      19930824   US 1992-866933           19920410
                                               US 1991-777811        B2 19911015
     AU 9227608              A      19930521   AU 1992-27608            19921006
     AU 661724               B2     19950803
                                               US 1991-777811        A  19911015
                                               US 1992-866933        A  19920410
                                               WO 1992-US8512        A  19921006
     EP 614360               A1     19940914   EP 1992-921348           19921006
     EP 614360               B1     19970319
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE
                                               US 1991-777811        A  19911015
                                               US 1992-866933        A  19920410
                                               WO 1992-US8512        W  19921006
     JP 07500111             T      19950105   JP 1993-507711           19921006
     JP 2813462              B2     19981022
                                               US 1991-777811        A  19911015
                                               US 1992-866933        A  19920410
                                               WO 1992-US8512        W  19921006
     AT 150302               T      19970415   AT 1992-921348           19921006
                                               US 1991-777811        A  19911015
                                               US 1992-866933        A  19920410
```

```
        ES 2099282          T3      19970516    ES 1992-921348          19921006
                                                US 1991-777811     A    19911015
                                                US 1992-866933     A    19920410
        CA 2115432          C       20030603    CA 1992-2115432         19921006
                                                US 1991-777811     A    19911015
                                                US 1992-866933     A    19920410
                                                WO 1992-US8512     W    19921006
        EP 542708           A1      19930519    EP 1992-870167          19921014
        EP 542708           B1      20010530
            R:  PT
                                                US 1991-777811     A    19911015
                                                US 1992-866933     A    19920410
        PT 542708           T       20011130    PT 1992-870167          19921014
                                                US 1991-777811     A    19911015
                                                US 1992-866933     A    19920410

PATENT FAMILY INFORMATION:
FAN  1995:487827
        PATENT NO.          KIND    DATE        APPLICATION NO.         DATE
        ---------------     ----    --------    --------------------    --------
PI   US 5344957            A       19940906    US 1992-953601          19921006
                                                US 1991-777811     B2   19911015
                                                US 1992-866933     A2   19920410
        US 5239113          A       19930824    US 1992-866933          19920410
                                                US 1991-777811     B2   19911015
        AT 150302           T       19970415    AT 1992-921348          19921006
                                                US 1991-777811     A    19911015
                                                US 1992-866933     A    19920410
        ES 2099282          T3      19970516    ES 1992-921348          19921006
                                                US 1991-777811     A    19911015
                                                US 1992-866933     A    19920410
        EP 542708           A1      19930519    EP 1992-870167          19921014
        EP 542708           B1      20010530
            R:  PT
                                                US 1991-777811     A    19911015
                                                US 1992-866933     A    19920410
        PT 542708           T       20011130    PT 1992-870167          19921014
                                                US 1991-777811     A    19911015
                                                US 1992-866933     A    19920410
        US 5625093          A       19970429    US 1995-452621          19950525
                                                US 1991-777811     B2   19911015
                                                US 1992-866933     A2   19920410
                                                US 1992-953601     A3   19921006
                                                US 1994-221913     B2   19940401
        US 5703125          A       19971230    US 1995-455612          19950531
                                                US 1991-777811     B2   19911015
                                                US 1992-866933     A2   19920410
                                                US 1992-953601     A3   19921006
                                                US 1994-221913     B3   19940401
        US 5886208          A       19990323    US 1997-835598          19970410
                                                US 1991-777811     B2   19911015
                                                US 1992-866933     A2   19920410
                                                US 1992-953601     A3   19921006
                                                US 1994-221913     B2   19940401
                                                US 1995-452621     A3   19950525
        US 5973003          A       19991026    US 1997-938856          19970926
                                                US 1991-777811     B2   19911015
                                                US 1992-866933     A2   19920410
                                                US 1992-953601     A3   19921006
                                                US 1994-221913     B3   19940401
                                                US 1995-455612     A1   19950531
FAN  1997:69789
        PATENT NO.          KIND    DATE        APPLICATION NO.         DATE
```
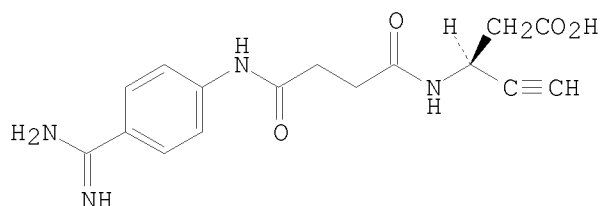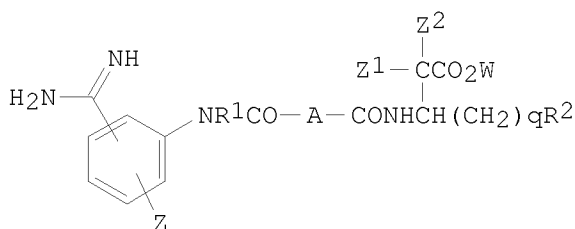
```
          ----------------      ----   --------      --------------------    --------
PI   WO 9637464           A1    19961128   WO 1996-US6960          19960521
          W:  AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE,
              ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT,
              LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
              SG, SI
          RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
              IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN
                                         US 1995-452621          A1 19950525
     US 5625093            A     19970429   US 1995-452621             19950525
                                         US 1991-777811          B2 19911015
                                         US 1992-866933          A2 19920410
                                         US 1992-953601          A3 19921006
                                         US 1994-221913          B2 19940401
     AU 9657940            A     19961211   AU 1996-57940              19960521
                                         US 1995-452621          A  19950525
                                         WO 1996-US6960          W  19960521
FAN  1997:344793
     PATENT NO.              KIND   DATE       APPLICATION NO.         DATE
     ----------------      ----   --------      --------------------    --------
PI   US 5625093            A     19970429   US 1995-452621             19950525
                                         US 1991-777811          B2 19911015
                                         US 1992-866933          A2 19920410
                                         US 1992-953601          A3 19921006
                                         US 1994-221913          B2 19940401
     US 5239113            A     19930824   US 1992-866933             19920410
                                         US 1991-777811          B2 19911015
     US 5344957            A     19940906   US 1992-953601             19921006
                                         US 1991-777811          B2 19911015
                                         US 1992-866933          A2 19920410
     WO 9637464            A1    19961128   WO 1996-US6960             19960521
          W:  AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE,
              ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT,
              LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
              SG, SI
          RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
              IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN
                                         US 1995-452621          A1 19950525
     AU 9657940            A     19961211   AU 1996-57940              19960521
                                         US 1995-452621          A  19950525
                                         WO 1996-US6960          W  19960521
     US 5886208            A     19990323   US 1997-835598             19970410
                                         US 1991-777811          B2 19911015
                                         US 1992-866933          A2 19920410
                                         US 1992-953601          A3 19921006
                                         US 1994-221913          B2 19940401
                                         US 1995-452621          A3 19950525
OS   MARPAT 119:139779
GI
```

NH
‖
H_2N—C

NR^1CO—A—$CONHCH(CH_2)_qR^2$

Z^1—$\overset{Z^2}{\underset{|}{C}}CO_2W$

Z

I

H_2N—C

NH

$\overset{H}{\underset{|}{N}}$

O

O

$\overset{H}{\underset{|}{N}}$

$\overset{H}{\underset{\diagdown}{C}}$ CH_2CO_2H

C≡CH

II

AB   The title β-amino acid derivs. I (R1 = H, optionally substituted
      lower alkyl, lower alkenyl, aryl, benzyl, phenethyl; R2, W = independently
      H, optionally substituted lower alkyl, lower alkenyl, lower alkynyl,
      cycloalkyl, aryl; A = divalent optionally substituted lower alkyl, lower
      alkenyl, lower alkynyl, cycloalkyl; Z, Z1, Z2 = independently H, OH, lower
      alkyl, halo, alkoxy, cyano, sulfonyl, carboxyl, alkoxycarbonyl; q = 0-6,
      with provisos) and pharmaceutical salts and compns. were prepared as compds.
      for inhibiting or modulating platelet aggregation. Thus, coupling of
      benzamidine acid 4-[HN:C(NH2)]C6H4NHCOCH2CH2CO2H.HCl (preparation given) with
      (S)-HC.tplbond.CCH(NH2)CH2CO2Et, followed by hydrolysis with pig liver
      esterase, gave pentynoic acid derivative II. II inhibited platelet
      aggregation in vitro with IC50 = 0.07 μM.

L10   ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
TI   Comparative analysis of the effect of low-molecular-weight substrate
      fragments and their analogs on the activity of phospholipases A2 from pig
      pancreas and cobra and bee venoms
AN   1978:18083 CAPLUS
DN   88:18083
OREF 88:2875a,2878a
TI   Comparative analysis of the effect of low-molecular-weight substrate
      fragments and their analogs on the activity of phospholipases A2 from pig
      pancreas and cobra and bee venoms
AU   Litvinko, N. M.; Khurgin, Yu. I.; Kaverzneva, E. D.; Akhrem, A. A.
CS   Inst. Org. Khim. im. Zelinskogo, Moscow, USSR
SO   Vestsi Akademii Navuk BSSR, Seryya Khimichnykh Navuk (1977), (5), 105-13
      CODEN: VBSKAK; ISSN: 0002-3590
DT   Journal
LA   Russian
AB   The inhibitory effect of alkylammonium compds. (R1R2R3R4N+), amino acids,
      peptides, aminoesters of benzoic acid, and choline analogs,
      [(Me)3N+(CH2)nXR]·Y, on the activity of phospholipase A2 from pig
      pancreas, cobra venom, and bee venom was studied using a gel diffusion
      method in lecithin-agarose gel. The results indicate that there are 3
      centers in the phospholipase A2 active site: a catalytic (esterase
) center, a cationic center, and an anionic center. The pancreatic and
      snake venom enzymes showed some similar reaction characteristics, whereas
      the bee enzyme showed greater differences. The contribution of each
      subsite in substrate interaction apparently differs in enzymes from
      different sources.

```
=> d his

        (FILE 'HOME' ENTERED AT 13:34:40 ON 08 MAY 2008)

        FILE 'REGISTRY' ENTERED AT 13:34:58 ON 08 MAY 2008
L1              STRUCTURE UPLOADED
L2            0 SEARCH L1 SSS SAM
L3            0 SEARCH L1 SSS FULL
L4              STRUCTURE UPLOADED
L5            0 SEARCH L4 SSS SAM
L6            0 SEARCH L4 SSS FULL
                E 3-PHENYLPROPANOIC ACID/CN
                E 3-AMINOPROPANOIC ACID/CN
                E 3-PHENYL-3-AMINOPROPANOIC ACID/CN

        FILE 'CAPLUS' ENTERED AT 13:54:19 ON 08 MAY 2008
                S 614-19-7/REG#

        FILE 'REGISTRY' ENTERED AT 13:54:54 ON 08 MAY 2008
L7            1 S 614-19-7/RN

        FILE 'CAPLUS' ENTERED AT 13:54:54 ON 08 MAY 2008
L8          365 S L7
L9       112871 HYDROLASE OR LIPASE OR ESTERASE
L10           5 L8 AND L9

=> Save temp l8 prodacids/a
ANSWER SET L8 HAS BEEN SAVED AS 'PRODACIDS/A'

=> logoff hold
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                  ENTRY       SESSION
FULL ESTIMATED COST                               36.68        398.69

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                  ENTRY       SESSION
CA SUBSCRIBER PRICE                               -4.00         -4.00

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:00:38 ON 08 MAY 2008

Connecting via Winsock to STN




Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 14:05:45 ON 08 MAY 2008
FILE 'CAPLUS' ENTERED AT 14:05:45 ON 08 MAY 2008
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                  ENTRY       SESSION
FULL ESTIMATED COST                               36.68        398.69

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
```

```
FILE 'REGISTRY' ENTERED AT 14:09:36 ON 08 MAY 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    7 MAY 2008   HIGHEST RN 1019993-29-3
DICTIONARY FILE UPDATES:   7 MAY 2008   HIGHEST RN 1019993-29-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

   Please note that search-term pricing does apply when
   conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Documents and Settings\PZucker\My Documents\Examination Auxillary
files\10549322\10549322 right acid genus formula (I).str
```
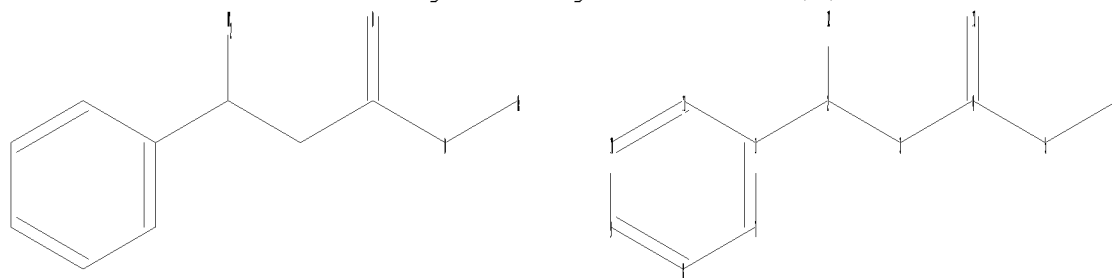


```
chain nodes :
2  3  4  5  6  12  13
ring nodes :
1  7  8  9  10  11
chain bonds :
1-2  2-3  2-12  3-4  4-5  4-13  5-6
ring bonds :
1-7  1-11  7-8  8-9  9-10  10-11
exact/norm bonds :
2-12  4-5  4-13  5-6
exact bonds :
```

```
1-2  2-3  3-4
normalized bonds :
1-7  1-11  7-8  8-9  9-10  10-11


Hydrogen count :
2:>= minimum 1  3:>= minimum 2
Match level :
1:Atom  2:CLASS  3:CLASS  4:CLASS  5:CLASS  6:CLASS  7:Atom  8:Atom  9:Atom
10:Atom  11:Atom  12:CLASS  13:CLASS
Element Count :
Node 6: Limited
     C,C2-5
```

```
L11      STRUCTURE UPLOADED

=> d l11
L11 HAS NO ANSWERS
L11                   STR
```
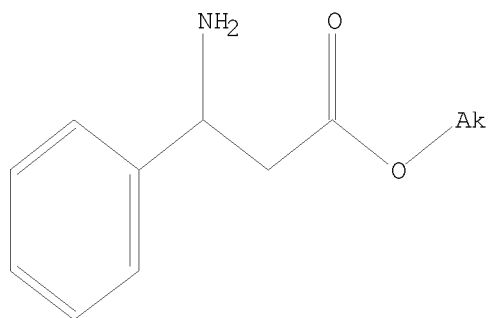


```
Structure attributes must be viewed using STN Express query preparation.


=> search l11 sss sam
SAMPLE SEARCH INITIATED 14:10:08 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    21884 TO ITERATE


  9.1% PROCESSED     2000 ITERATIONS                          3 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:     428825 TO   446535
PROJECTED ANSWERS:           313 TO      999

L12              3 SEA SSS SAM L11

=> d scan

L12  3 ANSWERS   REGISTRY  COPYRIGHT 2008 ACS on STN
IN   [1,1'-Biphenyl]-4-propanoic acid, β-amino-, 1,1-dimethylethyl ester,
     (βS)-
MF   C19 H23 N O2
```
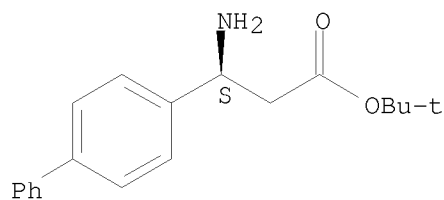
Absolute stereochemistry. Rotation (-).
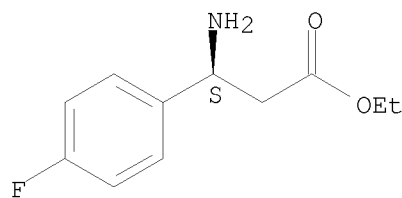
NH$_2$

O

S

OBu-t

Ph

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

L12   3 ANSWERS   REGISTRY   COPYRIGHT 2008 ACS on STN
IN   Benzenepropanoic acid, β-amino-4-fluoro-, ethyl ester, (βS)-
MF   C11 H14 F N O2

Absolute stereochemistry.

NH$_2$

O

S

OEt

F

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L12   3 ANSWERS   REGISTRY   COPYRIGHT 2008 ACS on STN
IN   Benzenepropanoic acid, β-amino-4-cyano-, ethyl ester, hydrochloride
      (1:1)
MF   C12 H14 N2 O2 . Cl H

NH$_2$

O

CH—CH$_2$—C—OEt

NC
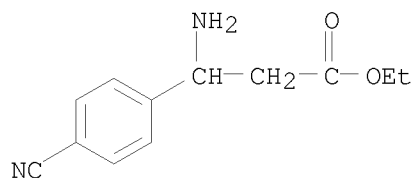
● HCl

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

```
=> search l11 sss full
FULL SEARCH INITIATED 14:10:38 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   435397 TO ITERATE

 99.0% PROCESSED    431133 ITERATIONS                           510 ANSWERS

100.0% PROCESSED    435397 ITERATIONS                           510 ANSWERS
SEARCH TIME: 00.00.16

L13          510 SEA SSS FUL L11

=> save temp l13 rawesters/a
ANSWER SET L13 HAS BEEN SAVED AS 'RAWESTERS/A'

=> file caplus
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                  ENTRY        SESSION
FULL ESTIMATED COST                               179.28       580.85


DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                  ENTRY        SESSION
CA SUBSCRIBER PRICE                               0.00         -4.00

FILE 'CAPLUS' ENTERED AT 14:11:35 ON 08 MAY 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 8 May 2008  VOL 148 ISS 19
FILE LAST UPDATED: 7 May 2008  (20080507/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

=> l13
L14          321 L13

=> save temp esterrefs/a
ENTER L#, L# RANGE, ALL, OR (END):l14
ANSWER SET L14 HAS BEEN SAVED AS 'ESTERREFS/A'

=> d his

     (FILE 'HOME' ENTERED AT 13:34:40 ON 08 MAY 2008)

     FILE 'REGISTRY' ENTERED AT 13:34:58 ON 08 MAY 2008
L1               STRUCTURE UPLOADED
```

```
L2                0 SEARCH L1 SSS SAM
L3                0 SEARCH L1 SSS FULL
L4                  STRUCTURE UPLOADED
L5                0 SEARCH L4 SSS SAM
L6                0 SEARCH L4 SSS FULL
                    E 3-PHENYLPROPANOIC ACID/CN
                    E 3-AMINOPROPANOIC ACID/CN
                    E 3-PHENYL-3-AMINOPROPANOIC ACID/CN


       FILE 'CAPLUS' ENTERED AT 13:54:19 ON 08 MAY 2008
                  S 614-19-7/REG#


       FILE 'REGISTRY' ENTERED AT 13:54:54 ON 08 MAY 2008
L7               1 S 614-19-7/RN


       FILE 'CAPLUS' ENTERED AT 13:54:54 ON 08 MAY 2008
L8             365 S L7
L9          112871 HYDROLASE OR LIPASE OR ESTERASE
L10              5 L8 AND L9
                   SAVE TEMP L8 PRODACIDS/A


       FILE 'REGISTRY' ENTERED AT 14:09:36 ON 08 MAY 2008
L11                STRUCTURE UPLOADED
L12              3 SEARCH L11 SSS SAM
L13            510 SEARCH L11 SSS FULL
                   SAVE TEMP L13 RAWESTERS/A


       FILE 'CAPLUS' ENTERED AT 14:11:35 ON 08 MAY 2008
L14            321 L13
                   SAVE TEMP ESTERREFS/A L14


=> l9 and l14
L15             20 L9 AND L14

=> save temp l20 centrHits/a
L20 NOT FOUND
The L-number entered has not been defined in this session, or it
has been deleted.  To see the L-numbers currently defined in this
session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> save temp l15 centrHits/a
ANSWER SET L15 HAS BEEN SAVED AS 'CENTRHITS/A'

=> d l15 20-15 ti
'20-15' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ---------- GI and AB
ALL --------- BIB, AB, IND, RE
APPS -------- AI, PRAI
BIB ---------- AN, plus Bibliographic Data and PI table (default)
CAN --------- List of CA abstract numbers without answer numbers
CBIB -------- AN, plus Compressed Bibliographic Data
CLASS ------- IPC, NCL, ECLA, FTERM
DALL -------- ALL, delimited (end of each field identified)
DMAX -------- MAX, delimited for post-processing
FAM --------- AN, PI and PRAI in table, plus Patent Family data
FBIB -------- AN, BIB, plus Patent FAM
IND --------- Indexing data
IPC --------- International Patent Classifications
MAX --------- ALL, plus Patent FAM, RE
```

```
PATS -------- PI, SO
SAM --------- CC, SX, TI, ST, IT
SCAN -------- CC, SX, TI, ST, IT (random display, no answer numbers;
                 SCAN must be entered on the same line as the DISPLAY,
                 e.g., D SCAN or DISPLAY SCAN)
STD --------- BIB, CLASS


IABS -------- ABS, indented with text labels
IALL -------- ALL, indented with text labels
IBIB -------- BIB, indented with text labels
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels


OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels


SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations


HIT --------- Fields containing hit terms
HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT)
                 containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and
                 its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its
                 structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
                 its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
                 structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
OCC --------- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field
codes.  For a list of the display field codes, enter HELP DFIELDS at
an arrow prompt (=>).  Examples of formats include: TI; TI,AU; BIB,ST;
TI,IND; TI,SO.  You may specify the format fields in any order and the
information will be displayed in the same order as the format
specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR,
FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC
to view a specified Accession Number.
ENTER DISPLAY FORMAT (BIB):end

=> d l15 15-20 ti

L15   ANSWER 15 OF 20  CAPLUS  COPYRIGHT 2008 ACS on STN
TI    Preparation of enantiomerically-enriched amino acid derivatives having
      photocleavable bonds

L15   ANSWER 16 OF 20  CAPLUS  COPYRIGHT 2008 ACS on STN
TI    Preparation of highly enantiopure β-amino esters by Candida
      antarctica lipase A

L15   ANSWER 17 OF 20  CAPLUS  COPYRIGHT 2008 ACS on STN
TI    Preparation of enantiomerically enriched aromatic β-amino acids via
      enzymatic resolution

L15   ANSWER 18 OF 20  CAPLUS  COPYRIGHT 2008 ACS on STN
TI    Variable molecular weight tags for nucleic acids and analysis of nucleic
```

acid reactions by mass spectrometry

L15   ANSWER 19 OF 20   CAPLUS   COPYRIGHT 2008 ACS on STN
TI   Preparation of [[[(amidinophenyl)amino]dioxoalkyl]amino]alkanoates as
       platelet aggregation inhibitors.

L15   ANSWER 20 OF 20   CAPLUS   COPYRIGHT 2008 ACS on STN
TI   Preparation of substituted β-amino acid derivatives useful as
       platelet aggregation inhibitors

=> d l15 15-17 ti fbib abs

L15   ANSWER 15 OF 20   CAPLUS   COPYRIGHT 2008 ACS on STN
TI   Preparation of enantiomerically-enriched amino acid derivatives having
       photocleavable bonds
AN   2001:167955 CAPLUS
DN   134:193745
TI   Preparation of enantiomerically-enriched amino acid derivatives having
       photocleavable bonds
IN   Skead, Benjamin M.; Faulconbridge, Susan J.; Winter, Stephen B. D.; Lock,
       Christopher J.
PA   Qiagen Genomics, Inc., USA
SO   PCT Int. Appl., 36 pp.
       CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PI WO 2001016090	A1	20010308	WO 2000-US24347		20000831

```
        W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
            HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
            LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
            SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
            YU, ZA, ZW
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
            CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
```

			US 1999-151769P	P	19990831
CA 2384191	A1	20010308	CA 2000-2384191		20000831
			US 1999-151769P	P	19990831
			WO 2000-US24347	W	20000831
EP 1208079	A1	20020529	EP 2000-961549		20000831

```
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL
```

			US 1999-151769P	P	19990831
			WO 2000-US24347	W	20000831
BR 2000013024	A	20020618	BR 2000-13024		20000831
			US 1999-151769P	P	19990831
			WO 2000-US24347	W	20000831
JP 2003508378	T	20030304	JP 2001-519660		20000831
			US 1999-151769P	P	19990831
			WO 2000-US24347	W	20000831
MX 2002PA02265	A	20030410	MX 2002-PA2265		20020228
			US 1999-151769P	P	19990831
			WO 2000-US24347	W	20000831

OS   CASREACT 134:193745; MARPAT 134:193745
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB   Compds. I and I [R1 is halogen or an organic moiety; R2 and R3 are H or organic
      moieties having a mass greater than 15 Daltons or R2 and R3 together form
      a carbonyl group or may be joined together within a cyclic structure; Z is
      an (n + 1)-valent atom excluding carbon where n is > 0; R4 is H, halogen,
      or an organic moiety having a mass greater than 15 Daltons, with the proviso
      that at least one R4 (namely R4a) is an organic moiety having a mass greater
      than 100 Daltons; R5 is halogen or an organic moiety having a mass of less
      than 500 Daltons; m is 0-4; if R2 = R3 = H, then R1 is not CO2H or CO2Me
      when Z(R4)n is either of NHCOCH(Bu-i)NHCO(CH2Ph or -O-Bu-t) and R4 is not
      CH2CO2-Bu-t when Z is OH], or a mixture containing one of the isomers I or II
in
      excess, were prepared for use as tags, including tags detectable by mass
      spectrometry. Thus, compds. II (RCO2H are carboxylic acids having
      variable mass units (VMUs) in the range 90-298 amu) were prepared and
      conjugated to 5'-aminohexyl-tailed oligonucleotides.
RE.CNT 4   THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI   Preparation of highly enantiopure β-amino esters by Candida
      antarctica lipase A
AN   2001:167353 CAPLUS
DN   135:33216
TI   Preparation of highly enantiopure β-amino esters by Candida
      antarctica lipase A
AU   Gedey, S.; Liljeblad, A.; Lazar, L.; Fulop, F.; Kanerva, L. T.
CS   Department of Chemistry and Laboratory of Synthetic Drug Chemistry,
      University of Turku, Turku, FIN-20520, Finland
SO   Tetrahedron: Asymmetry (2001), 12(1), 105-110
      CODEN: TASYE3; ISSN: 0957-4166
PB   Elsevier Science Ltd.
DT   Journal
LA   English
OS   CASREACT 135:33216
AB   The enantioselectivities for the reactions of aliphatic β-substituted
      β-amino esters [RCH(NH2)CH2CO2Et with R = Me, Et, n-Pr, i-Pr, Et2CH,
      cyclohexyl, Ph] with Bu butanoate in neat Bu butanoate and with
      2,2,2-trifluoroethyl butanoate in diisopropyl ether were studied in the
      presence of Candida antarctica lipase A. Enantioselectivities
      ranging from good (E = 70-100) to excellent (E >100) were commonly observed,
      allowing gram-scale resolution of the substrates. Highly enantioselective
      acylations catalyzed by CAL-A were studied.
RE.CNT 13   THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI   Preparation of enantiomerically enriched aromatic β-amino acids via
      enzymatic resolution
AN   2000:270001 CAPLUS
DN   133:43775
TI   Preparation of enantiomerically enriched aromatic β-amino acids via
      enzymatic resolution
AU   Faulconbridge, Susan J.; Holt, Karen E.; Sevillano, Luis Garcia; Lock,
      Christopher J.; Tiffin, Peter D.; Tremayne, Neil; Winter, Stephen
CS   Celltech Chiroscience Ltd, Cambridge Science Park, Cambridge, CB4 0WG, UK
SO   Tetrahedron Letters (2000), 41(15), 2679-2681
      CODEN: TELEAY; ISSN: 0040-4039
PB   Elsevier Science Ltd.

```
DT    Journal
LA    English
OS    CASREACT 133:43775
AB    A range of enantiomerically enriched aromatic β-amino acids with high ee
      were prepared via lipase-catalyzed enzymic resolution of Et ester
      derivs.
RE.CNT  8    THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> logoff hold
COST IN U.S. DOLLARS                               SINCE FILE      TOTAL
                                                     ENTRY        SESSION
FULL ESTIMATED COST                                  16.65        597.50

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)         SINCE FILE      TOTAL
                                                     ENTRY        SESSION
CA SUBSCRIBER PRICE                                  -2.40         -6.40

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:19:01 ON 08 MAY 2008

Connecting via Winsock to STN




Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page for STN Seminar Schedule - N. America
 NEWS  2  JAN 02   STN pricing information for 2008 now available
 NEWS  3  JAN 16   CAS patent coverage enhanced to include exemplified
                   prophetic substances
 NEWS  4  JAN 28   USPATFULL, USPAT2, and USPATOLD enhanced with new
                   custom IPC display formats
 NEWS  5  JAN 28   MARPAT searching enhanced
 NEWS  6  JAN 28   USGENE now provides USPTO sequence data within 3 days
                   of publication
 NEWS  7  JAN 28   TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS  8  JAN 28   MEDLINE and LMEDLINE reloaded with enhancements
 NEWS  9  FEB 08   STN Express, Version 8.3, now available
 NEWS 10  FEB 20   PCI now available as a replacement to DPCI
 NEWS 11  FEB 25   IFIREF reloaded with enhancements
 NEWS 12  FEB 25   IMSPRODUCT reloaded with enhancements
 NEWS 13  FEB 29   WPINDEX/WPIDS/WPIX enhanced with ECLA and current
                   U.S. National Patent Classification
 NEWS 14  MAR 31   IFICDB, IFIPAT, and IFIUDB enhanced with new custom
                   IPC display formats
 NEWS 15  MAR 31   CAS REGISTRY enhanced with additional experimental
                   spectra
 NEWS 16  MAR 31   CA/CAplus and CASREACT patent number format for U.S.
                   applications updated
 NEWS 17  MAR 31   LPCI now available as a replacement to LDPCI
 NEWS 18  MAR 31   EMBASE, EMBAL, and LEMBASE reloaded with enhancements
```

```
 NEWS 19   APR 04   STN AnaVist, Version 1, to be discontinued
 NEWS 20   APR 15   WPIDS, WPINDEX, and WPIX enhanced with new
                    predefined hit display formats
 NEWS 21   APR 28   EMBASE Controlled Term thesaurus enhanced
 NEWS 22   APR 28   IMSRESEARCH reloaded with enhancements
 NEWS 23   MAY 30   INPAFAMDB now available on STN for patent family
                    searching
 NEWS 24   MAY 30   DGENE, PCTGEN, and USGENE enhanced with new homology
                    sequence search option
 NEWS 25   JUN 06   EPFULL enhanced with 260,000 English abstracts
 NEWS 26   JUN 06   KOREAPAT updated with 41,000 documents

 NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

 NEWS HOURS     STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN     Welcome Banner and News Items
 NEWS IPC8      For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * STN   Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 08:10:31 ON 09 JUN 2008

=> ile regf
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
Some commands only work in certain files.  For example, the EXPAND
command can only be used to look at the index in a file which has an
index.  Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of
commands which can be used in this file.

=> file casreact
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                    ENTRY        SESSION
FULL ESTIMATED COST                                  0.21          0.21

FILE 'CASREACT' ENTERED AT 08:10:52 ON 09 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.

FILE CONTENT:1840 - 7 Jun 2008 VOL 148 ISS 24

New CAS Information Use Policies, enter HELP USAGETERMS for details.

****************************************************************
*                                                              *
*     CASREACT now has more than 13.8 million reactions        *
*                                                              *
****************************************************************
```

Some CASREACT records are derived from the ZIC/VINITI database (1974-1999)
provided by InfoChem, INPI data prior to 1986, and Biotransformations
database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance
identification.

=>
Uploading C:\Documents and Settings\PZucker\My Documents\Examination Auxillary
files\10549322\10549322 Group III process.str
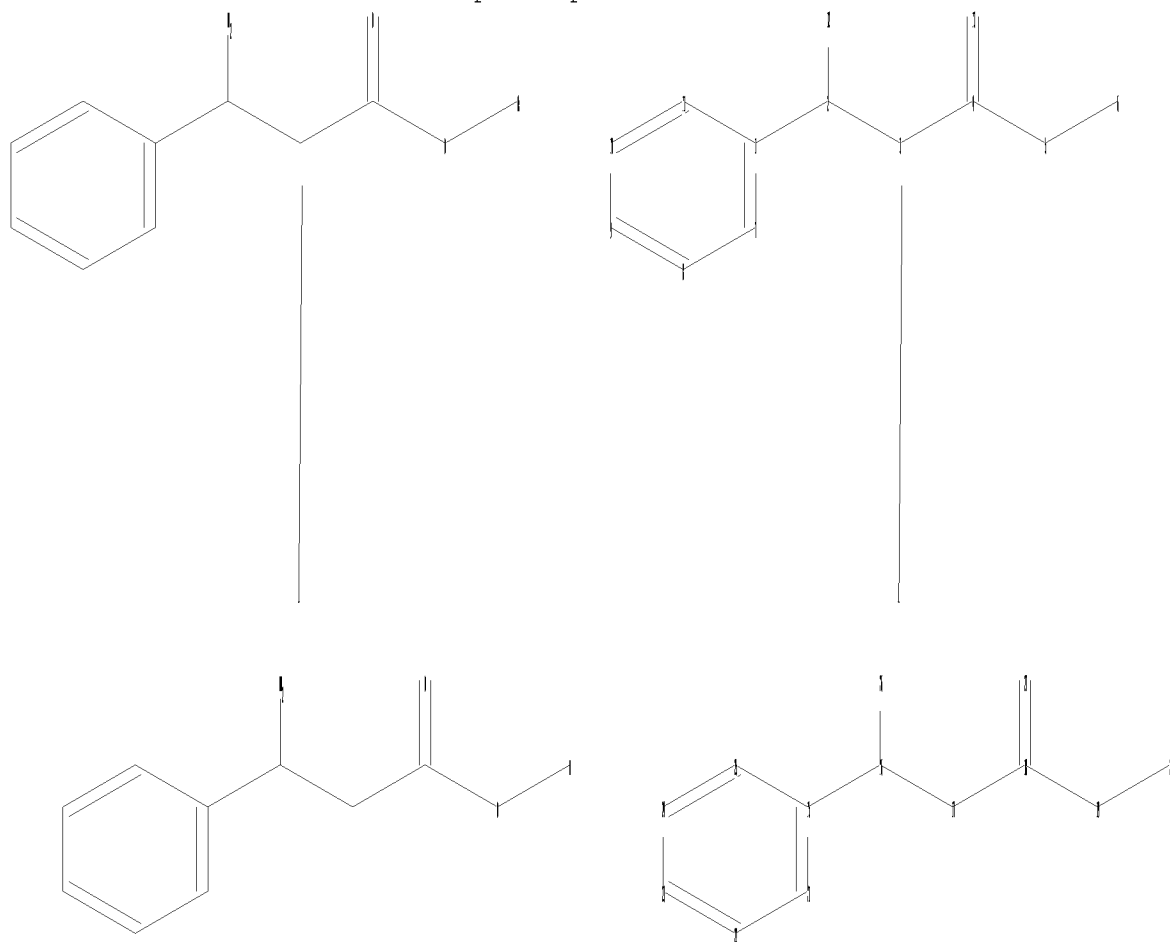
chain nodes :
2   3   4   5   6   12   13   16   17   18   19   20   26   27
ring nodes :
1   7   8   9   10   11   15   21   22   23   24   25
chain bonds :
1-2   2-3   2-12   3-4   4-5   4-13   5-6   15-16   16-17   16-26   17-18   18-19   18-27
19-20
ring bonds :
1-7   1-11   7-8   8-9   9-10   10-11   15-21   15-25   21-22   22-23   23-24   24-25
exact/norm bonds :
2-12   4-5   4-13   5-6   16-26
exact bonds :
1-2   2-3   3-4   15-16   16-17   17-18   19-20
normalized bonds :
1-7   1-11   7-8   8-9   9-10   10-11   15-21   15-25   18-19   18-27   21-22   22-23   23-24
24-25

Hydrogen count :
2:>= minimum 1 3:>= minimum 2 16:>= minimum 1 17:>= minimum 2
Match level :
1:Atom 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:Atom 8:Atom 9:Atom
10:Atom 11:Atom 12:CLASS 13:CLASS 15:Atom 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:CLASS 27:CLASS

fragments assigned product role:
containing 15
fragments assigned reactant/reagent role:
containing 1
Element Count :
Node 6: Limited
    C,C2-5

L1   STRUCTURE UPLOADED

=> search l1 sss sam
SAMPLE SEARCH INITIATED 08:12:58 FILE 'CASREACT'
SCREENING COMPLETE -   708 REACTIONS TO VERIFY FROM   53 DOCUMENTS

100.0% DONE   708 VERIFIED   0 HIT RXNS   0 DOCS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED VERIFICATIONS: 12565 TO   15755
PROJECTED ANSWERS: 0 TO   0

L2   0 SEA SSS SAM L1 (0 REACTIONS)

=> search l1 sss full
FULL SEARCH INITIATED 08:13:10 FILE 'CASREACT'
SCREENING COMPLETE -   11926 REACTIONS TO VERIFY FROM   1016 DOCUMENTS

100.0% DONE   11926 VERIFIED   49 HIT RXNS   10 DOCS
SEARCH TIME: 00.00.03

L3   10 SEA SSS FUL L1 (49 REACTIONS)

=> d scqan
'SCQAN' IS NOT A VALID FORMAT FOR FILE 'CASREACT'

The following are valid formats:

ABS --------- GI and AB
ALL --------- BIB, AB, IND, RE, Single-step Reactions
APPS ------- AI, PRAI
BIB --------- AN, plus Bibliographic Data
CAN --------- List of CA abstract numbers without answer numbers
CBIB ------- AN, plus Compressed Bibliographic Data
DALL ------- ALL, delimited (end of each field identified)
IABS ------- ABS, indented with text labels
IALL ------- ALL, indented with text labels
IBIB ------- BIB, indented with text labels
IND --------- Indexing data

```
IPC -------- International Patent Classifications
ISTD ------- STD, indented with text labels
OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels


SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations


MAX -------- Same as ALL
PATS ------- PI, SO
SCAN ------- TI and FCRD (random display, no answer number.  SCAN
             must be entered on the same line as DISPLAY, e.g.,
             D SCAN.)
SSRX ------- Single-Step Reactions (Map, Diagram, and Summary for
             all single-step reactions)
STD -------- BIB, IPC, and NCL


CRD -------- Compact Display of All Hit Reactions
CRDREF ----- Compact Reaction Display and SO, PY for Reference
FHIT ------- Reaction Map, Diagram, and Summary for first
             hit reaction
FHITCBIB --- FHIT, AN plus CBIB
FCRD ------- First hit in Compact Reaction Display (CRD) format
FCRDREF ---- First hit in Compact Reaction Display (CRD) format with
             CA reference information (SO, PY).  (Default)
FPATH ------ PATH, plus Reaction Summary for the "long path"
FSPATH ----- SPATH, plus Reaction Summary for the "short path"
HIT -------- Reaction Map, Reaction Diagram, and Reaction
             Summary for all hit reactions and fields containing
             hit terms
OCC -------- All hit fields and the number of occurrences of the
             hit terms in each field.  Includes total number of
             HIT, PATH, SPATH reactions. Labels reactions that have
             incomplete verifications.
PATH ------- Reaction Map and Reaction Diagram for the "long
             path".  Displays all hit reactions, except those
             whose steps are totally included within another hit
             reaction which is displayed
RX --------- Hit Reactions (Map, Diagram, Summary for all hit reactions)
RXG -------- Hit Reaction Graphics (Map and Diagram for all hit reactions)
RXL -------- Hit Reaction Long (Map, Diagram, Summary for all hit reactions)
RXS -------- Hit Reaction Summariers (Map and Summary for all hit reactions)
SPATH ------ Reaction Map and Reaction Diagram for the "short
             path".  Displays all single step reactions which
             contain a hit substance.  Also displays those
             multistep reactions that have a hit substance in both
             the first and last steps of the reaction, except for
             those hit reactions whose steps are totally included
             within another hit reaction which is displayed


To display a particular field or fields, enter the display field
codes.  For a list of the display field codes, enter HELP DFIELDS
at an arrow prompt (=>).  Examples of combinations include: D TI;
D BIB RX; D TI, AU, FCRD.  The information is displayed in the same order
as the specification.  All of the formats, except CRD, CRDREF, FHIT, PATH,
FPATH, SPATH, FSPATH, FCRD, FCRDREF, HIT, RX, RXG, RXS, SCAN, and OCC, may
be used with the DISPLAY command to display the record for a specified
Accession Number.

ENTER DISPLAY FORMAT (FCRDREF):end


=> d scan
```

TI   Asymmetric syntheses of β-phenylalanine, α-methyl-β-
      phenylalanines and derivatives

RX(3) OF 25

100%

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

TI   High asymmetric induction in the 1,3-dipolar cycloaddition of
      (R)-(+)-p-tolyl vinyl sulfoxide with acyclic nitrones

RX(2) OF 8

TI   Parallel synthesis of homochiral β-amino acids

RX(79) OF 195

99%

TI   Homochiral lithium amides for the asymmetric synthesis of β-amino
      acids

HCl
93%
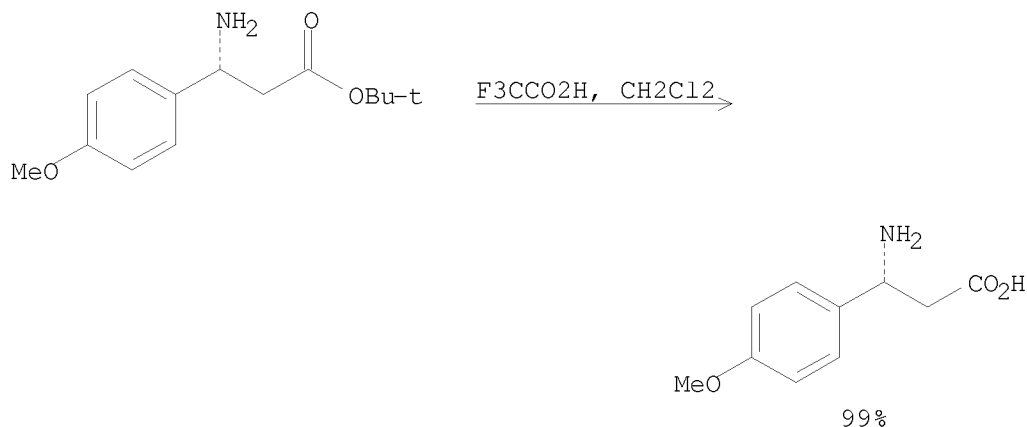
L3   10 ANSWERS   CASREACT   COPYRIGHT 2008 ACS on STN

TI   Enantioselective enzymatic reactions in miniemulsions as efficient
      "nanoreactors"

RX(1) OF 2

NOTE: biotransformation, enzymic, Amano lipase PS used, alternative
      reaction conditions gave lower yield

L3   10 ANSWERS   CASREACT   COPYRIGHT 2008 ACS on STN

TI   New access to racemic β3-amino acids

RX(31) OF 80

L3   10 ANSWERS   CASREACT   COPYRIGHT 2008 ACS on STN

TI   Synthesis of the enantiomers and N-protected derivatives of
      3-amino-3-(4-cyanophenyl)propanoic acid

1. HCl, Water
2. Water

66%

HCl

(step 1)
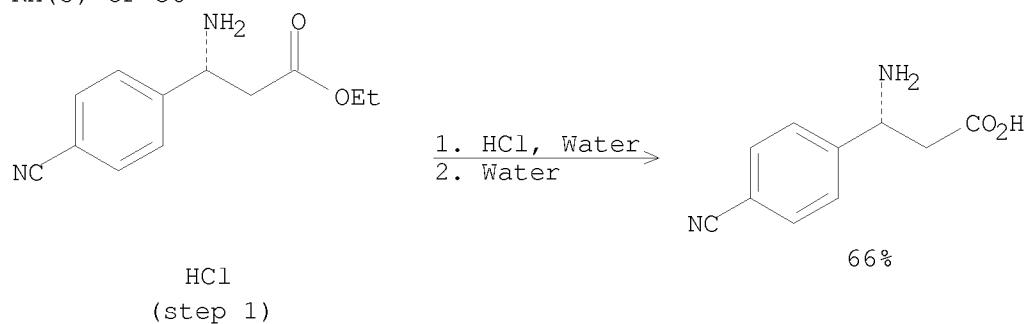
NOTE: in stage 2 crude product desalted by ion-exchange chromatog. on
      Varion KS resin

L3   10 ANSWERS   CASREACT   COPYRIGHT 2008 ACS on STN

TI   Lipase kinetic resolution of racemic β-amino acids esters

RX(1) OF 4

Lipase, Me2CO, NaOH,
Water
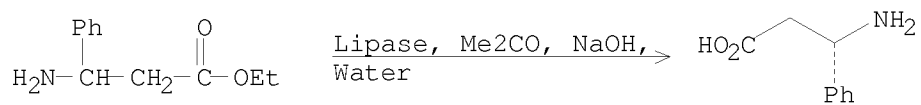
NOTE: biotransformation, enzymic, stereoselective, Amano Lipase PS
      used

L3   10 ANSWERS   CASREACT   COPYRIGHT 2008 ACS on STN

TI   β-Amino acid enzymic manufacture and enantiomeric enrichment with
     lipase

RX(1) OF 1

t-BuOMe, Water
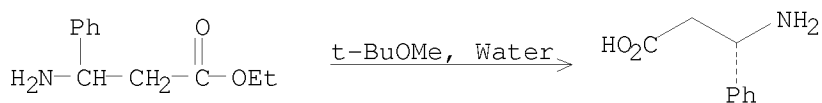
NOTE: alternative prepn. shown, biotransformation, enzymic,
      Pseudomanas cepacia used

L3   10 ANSWERS   CASREACT   COPYRIGHT 2008 ACS on STN

TI   Preparation of enantiomerically enriched aromatic β-amino acids via
     enzymatic resolution

H_2N—CH—CH_2—C—OEt with Ph and O groups (step 1)

1. Lipase, KH2PO4, Water
2. NaOH, Water, AcOEt

→ HO_2C ... NH_2 / Ph 44% +

EtO—C(=O)—CH_2—CH(NH_2)—Ph 36%
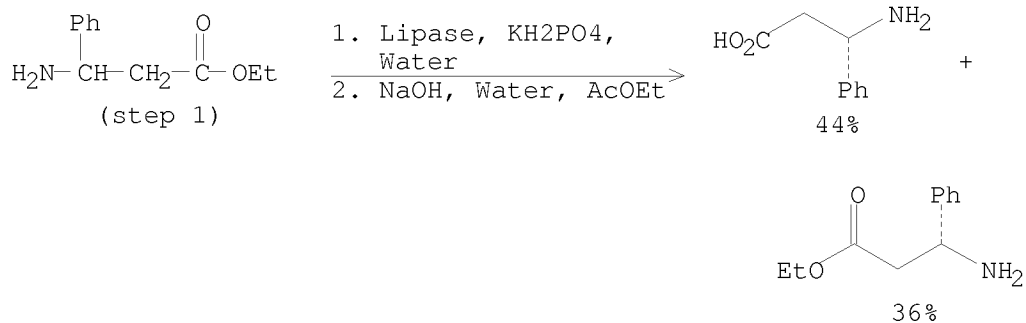
NOTE: biotransformation, stereoselective enzymic hydrolysis, Amano PS used

ALL ANSWERS HAVE BEEN SCANNED

=> save temp l3 rxnhits/a
ANSWER SET L3 HAS BEEN SAVED AS 'RXNHITS/A'

=> file caplus
COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                       ENTRY   SESSION
FULL ESTIMATED COST   120.72   120.93

FILE 'CAPLUS' ENTERED AT 08:14:56 ON 09 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1907 – 9 Jun 2008 VOL 148 ISS 24
FILE LAST UPDATED: 8 Jun 2008 (20080608/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/legal/infopolicy.html

=> l3
L4   10 L3

=> d l4 1-10 ti

L4   ANSWER 1 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
TI   Parallel synthesis of homochiral β-amino acids

```
L4   ANSWER 2 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Homochiral lithium amides for the asymmetric synthesis of β-amino
     acids

L4   ANSWER 3 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Enantioselective enzymatic reactions in miniemulsions as efficient
     "nanoreactors"

L4   ANSWER 4 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   New access to racemic β3-amino acids

L4   ANSWER 5 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Synthesis of the enantiomers and N-protected derivatives of
     3-amino-3-(4-cyanophenyl)propanoic acid

L4   ANSWER 6 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   β-Amino acid enzymic manufacture and enantiomeric enrichment with
     lipase

L4   ANSWER 7 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Lipase kinetic resolution of racemic β-amino acids esters

L4   ANSWER 8 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Preparation of enantiomerically enriched aromatic β-amino acids via
     enzymatic resolution

L4   ANSWER 9 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Asymmetric syntheses of β-phenylalanine, α-methyl-β-
     phenylalanines and derivatives

L4   ANSWER 10 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   High asymmetric induction in the 1,3-dipolar cycloaddition of
     (R)-(+)-p-tolyl vinyl sulfoxide with acyclic nitrones


=> d l4 3,5,6,7,8 ti fbib abs

L4   ANSWER 3 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Enantioselective enzymatic reactions in miniemulsions as efficient
     "nanoreactors"
AN   2006:242246  CAPLUS
DN   144:431190
TI   Enantioselective enzymatic reactions in miniemulsions as efficient
     "nanoreactors"
AU   Groeger, Harald; May, Oliver; Huesken, Hendrik; Georgeon, Sandrine; Drauz,
     Karlheinz; Landfester, Katharina
CS   Service Center Biocatalysis, Degussa AG, Hanau, 63403, Germany
SO   Angewandte Chemie, International Edition (2006), 45(10), 1645-1648
     CODEN: ACIEF5; ISSN: 1433-7851
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
OS   CASREACT 144:431190
AB   Phasing in: Miniemulsions are homogenous mixts. in which the organic phase is
     dispersed in the form of nanometerscale droplets, which can act as
     efficient "nanoreactors" for enantioselective enzymic transformations.
     Very high substrate concns. are possible, and both α- and
     β-amino acids were prepared with high conversions and up to > 99% ee.
RE.CNT  25    THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4   ANSWER 5 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
```
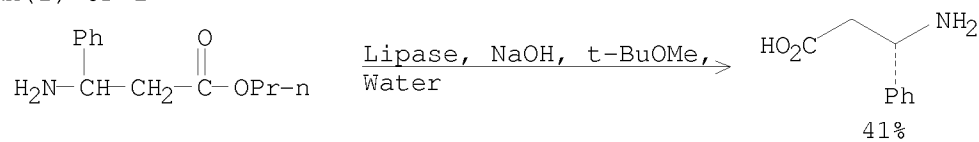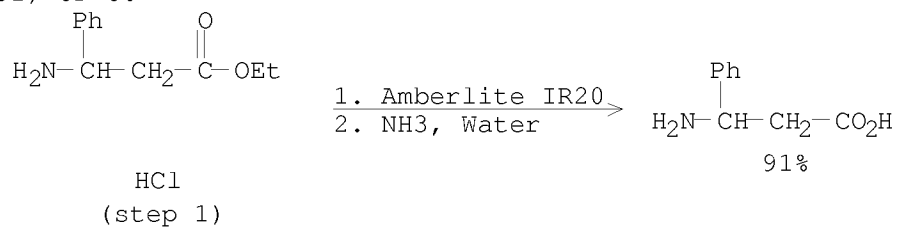
TI   Synthesis of the enantiomers and N-protected derivatives of
      3-amino-3-(4-cyanophenyl)propanoic acid
AN   2004:498532 CAPLUS
DN   141:191019
TI   Synthesis of the enantiomers and N-protected derivatives of
      3-amino-3-(4-cyanophenyl)propanoic acid
AU   Solymar, Magdolna; Kanerva, Liisa T.; Fulop, Ferenc
CS   Institute of Pharmaceutical Chemistry, University of Szeged, Szeged,
      H-6701, Hung.
SO   Tetrahedron: Asymmetry (2004), 15(12), 1893-1897
      CODEN: TASYE3; ISSN: 0957-4166
PB   Elsevier Science B.V.
DT   Journal
LA   English
OS   CASREACT 141:191019

AB   Racemic Et 3-amino-3-(4-cyanophenyl)propanoate was synthesized and the
      enantiomers separated through enantioselective N-acylation by Candida
      antarctica lipase A (CAL-A) in neat Bu butanoate. The free amino acid
      enantiomers were transformed to the Boc and Fmoc-protected derivs. (Boc =
      tert-butoxycarbonyl, Fmoc = 9-fluorenylmethyloxycarbonyl).
RE.CNT 27   THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4   ANSWER 6 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
TI   β-Amino acid enzymic manufacture and enantiomeric enrichment with
      lipase
AN   2003:897664 CAPLUS
DN   139:363702
TI   β-Amino acid enzymic manufacture and enantiomeric enrichment with
      lipase
IN   Groeger, Harald; Werner, Helge
PA   Degussa A.-G., Germany
SO   Jpn. Kokai Tokkyo Koho, 8 pp.
      CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PI	JP 2003325197	A	20031118	JP 2003-130565		20030508
				DE 2002-10220740	A	20020508
	DE 10220740	A1	20031127	DE 2002-10220740		20020508
	SG 120092	A1	20060328	SG 2003-2077		20030409
				DE 2002-10220740	A	20020508
	IN 2003KO00252	A	20041218	IN 2003-KO252		20030502
				DE 2002-10220740	A	20020508
	CA 2428163	A1	20031108	CA 2003-2428163		20030507
				DE 2002-10220740	A	20020508
	CN 1456676	A	20031119	CN 2003-123428		20030507
				DE 2002-10220740	A	20020508
	EP 1367129	A2	20031203	EP 2003-10226		20030507
	EP 1367129	A3	20031217			

        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
				DE 2002-10220740	A	20020508
	US 20040029236	A1	20040212	US 2003-430382		20030507
	US 6869781	B2	20050322			
				DE 2002-10220739	A	20020508
				DE 2002-10220740	A	20020508
	US 20050142646	A1	20050630	US 2005-52243		20050208
	US 6987010	B2	20060117			
				DE 2002-10220739	A	20020508

```
                                        DE 2002-10220740    A 20020508
                                        US 2003-430382      A3 20030507
PATENT FAMILY INFORMATION:
FAN  2003:891993
     PATENT NO.          KIND    DATE      APPLICATION NO.        DATE
     --------------      ----    --------  --------------------   --------
PI   EP 1361279          A1      20031112  EP 2003-10224          20030507
     EP 1361279          B1      20060705
          R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                                        DE 2002-10220739    A 20020508
     DE 10220739         A1      20031127  DE 2002-10220739       20020508
     SG 120094           A1      20060328  SG 2003-2193           20030414
                                        DE 2002-10220739    A 20020508
     IN 2003KO00251      A       20041218  IN 2003-KO251          20030502
                                        DE 2002-10220739    A 20020508
     CA 2428059          A1      20031108  CA 2003-2428059        20030507
                                        DE 2002-10220739    A 20020508
     CN 1456675          A       20031119  CN 2003-123427         20030507
                                        DE 2002-10220739    A 20020508
     DE 10320211         A1      20040212  DE 2003-10320211       20030507
                                        DE 2002-10220739    A1 20020508
     US 20040029236      A1      20040212  US 2003-430382         20030507
     US 6869781          B2      20050322
                                        DE 2002-10220739    A 20020508
                                        DE 2002-10220740    A 20020508
     AT 332391           T       20060715  AT 2003-10224          20030507
                                        DE 2002-10220739    A 20020508
     ES 2268212          T3      20070316  ES 2003-10224          20030507
                                        DE 2002-10220739    A 20020508
     JP 2003325195       A       20031118  JP 2003-130566         20030508
                                        DE 2002-10220739    A 20020508
     US 20050142646      A1      20050630  US 2005-52243          20050208
     US 6987010          B2      20060117
                                        DE 2002-10220739    A 20020508
                                        DE 2002-10220740    A 20020508
                                        US 2003-430382      A3 20030507
OS   CASREACT 139:363702
AB   β-Amino acid esters are incubated with lipase in the presence of
     water-organic solvent two-phase reaction medium for enantiomeric enrichment
     of β-amino acids without the N-protection process.  Preparation of
     (S)-3-amino-3-phenylpropionic acid with lipase Amano PS from racemic
     3-amino-3-phenylpropionic acid Et ester in the water-acetone reaction
     medium was shown.

L4   ANSWER 7 OF 10  CAPLUS  COPYRIGHT 2008 ACS on STN
TI   Lipase kinetic resolution of racemic β-amino acids esters
AN   2003:891993  CAPLUS
DN   139:363709
TI   Lipase kinetic resolution of racemic β-amino acids esters
IN   Groeger, Harald; Werner, Helge
PA   Degussa A.-G., Germany
SO   Eur. Pat. Appl., 10 pp.
     CODEN: EPXXDW
DT   Patent
LA   German
FAN.CNT 2
     PATENT NO.          KIND    DATE      APPLICATION NO.        DATE
     --------------      ----    --------  --------------------   --------
PI   EP 1361279          A1      20031112  EP 2003-10224          20030507
     EP 1361279          B1      20060705
          R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
```

```
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                                          DE 2002-10220739      A   20020508
       DE 10220739          A1    20031127  DE 2002-10220739          20020508
       SG 120094            A1    20060328  SG 2003-2193              20030414
                                          DE 2002-10220739      A   20020508
       IN 2003KO00251       A     20041218  IN 2003-KO251             20030502
                                          DE 2002-10220739      A   20020508
       CA 2428059           A1    20031108  CA 2003-2428059           20030507
                                          DE 2002-10220739      A   20020508
       CN 1456675           A     20031119  CN 2003-123427            20030507
                                          DE 2002-10220739      A   20020508
       DE 10320211          A1    20040212  DE 2003-10320211          20030507
                                          DE 2002-10220739      A1  20020508
       US 20040029236       A1    20040212  US 2003-430382            20030507
       US 6869781           B2    20050322
                                          DE 2002-10220739      A   20020508
                                          DE 2002-10220740      A   20020508
       AT 332391            T     20060715  AT 2003-10224             20030507
                                          DE 2002-10220739      A   20020508
       ES 2268212           T3    20070316  ES 2003-10224             20030507
                                          DE 2002-10220739      A   20020508
       JP 2003325195        A     20031118  JP 2003-130566            20030508
                                          DE 2002-10220739      A   20020508
       US 20050142646       A1    20050630  US 2005-52243             20050208
       US 6987010           B2    20060117
                                          DE 2002-10220739      A   20020508
                                          DE 2002-10220740      A   20020508
                                          US 2003-430382        A3  20030507
PATENT FAMILY INFORMATION:
FAN  2003:897664
       PATENT NO.            KIND   DATE      APPLICATION NO.          DATE
       --------------        ----   --------  -------------------      --------
PI     JP 2003325197        A     20031118  JP 2003-130565            20030508
                                          DE 2002-10220740      A   20020508
       DE 10220740          A1    20031127  DE 2002-10220740          20020508
       SG 120092            A1    20060328  SG 2003-2077              20030409
                                          DE 2002-10220740      A   20020508
       IN 2003KO00252       A     20041218  IN 2003-KO252             20030502
                                          DE 2002-10220740      A   20020508
       CA 2428163           A1    20031108  CA 2003-2428163           20030507
                                          DE 2002-10220740      A   20020508
       CN 1456676           A     20031119  CN 2003-123428            20030507
                                          DE 2002-10220740      A   20020508
       EP 1367129           A2    20031203  EP 2003-10226             20030507
       EP 1367129           A3    20031217
          R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                                          DE 2002-10220740      A   20020508
       US 20040029236       A1    20040212  US 2003-430382            20030507
       US 6869781           B2    20050322
                                          DE 2002-10220739      A   20020508
                                          DE 2002-10220740      A   20020508
       US 20050142646       A1    20050630  US 2005-52243             20050208
       US 6987010           B2    20060117
                                          DE 2002-10220739      A   20020508
                                          DE 2002-10220740      A   20020508
                                          US 2003-430382        A3  20030507
```
OS   CASREACT 139:363709; MARPAT 139:363709

AB   A process is provided for the preparation of enantiomerically enriched
     β-amino acids by a lipase catalyzed kinetic resolution of racemic
     β-amino acid esters. Thus, 1.79 g of 3-Amino-3-phenylpropanoic acid,
     Et ester was dissolved in 50 mL water and 3 mL acetone in a pH-stat. The

pH was controlled at 8.2 and the reaction temperature was 20 °C. The
reaction was started with the addition of 200 mg of Pseudomonas cepacia
lipase. After three hours, the reaction produced a 48.7% yield of
(S)-3-Amino-3-phenylpropanoic acid with an enantiomeric excess of 96.%.
RE.CNT 4   THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4   ANSWER 8 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
TI   Preparation of enantiomerically enriched aromatic β-amino acids via
      enzymatic resolution
AN   2000:270001 CAPLUS
DN   133:43775
TI   Preparation of enantiomerically enriched aromatic β-amino acids via
      enzymatic resolution
AU   Faulconbridge, Susan J.; Holt, Karen E.; Sevillano, Luis Garcia; Lock,
      Christopher J.; Tiffin, Peter D.; Tremayne, Neil; Winter, Stephen
CS   Celltech Chiroscience Ltd, Cambridge Science Park, Cambridge, CB4 0WG, UK
SO   Tetrahedron Letters (2000), 41(15), 2679-2681
      CODEN: TELEAY; ISSN: 0040-4039
PB   Elsevier Science Ltd.
DT   Journal
LA   English
OS   CASREACT 133:43775
AB   A range of enantiomerically enriched aromatic β-amino acids with high ee
      were prepared via lipase-catalyzed enzymic resolution of Et ester derivs.
RE.CNT 8   THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> enzyme
         855963 ENZYME
         488770 ENZYMES
L5   1080659 ENZYME
                 (ENZYME OR ENZYMES)

=> l4 and l5
L6   1 L4 AND L5

=> d l6

L6   ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
AN   2003:891993 CAPLUS
DN   139:363709
TI   Lipase kinetic resolution of racemic β-amino acids esters
IN   Groeger, Harald; Werner, Helge
PA   Degussa A.-G., Germany
SO   Eur. Pat. Appl., 10 pp.
      CODEN: EPXXDW
DT   Patent
LA   German
FAN.CNT 2
      PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
      --------------   ----   --------   --------------------   --------
PI   EP 1361279   A1   20031112   EP 2003-10224   20030507
      EP 1361279   B1   20060705
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      DE 10220739   A1   20031127   DE 2002-10220739   20020508
      SG 120094   A1   20060328   SG 2003-2193   20030414
      IN 2003KO00251   A   20041218   IN 2003-KO251   20030502
      CA 2428059   A1   20031108   CA 2003-2428059   20030507
      CN 1456675   A   20031119   CN 2003-123427   20030507

```
        DE 10320211          A1    20040212    DE 2003-10320211        20030507
        US 20040029236       A1    20040212    US 2003-430382          20030507
        US 6869781           B2    20050322
        AT 332391            T     20060715    AT 2003-10224           20030507
        ES 2268212           T3    20070316    ES 2003-10224           20030507
        JP 2003325195        A     20031118    JP 2003-130566          20030508
        US 20050142646       A1    20050630    US 2005-52243           20050208
        US 6987010           B2    20060117
PRAI DE 2002-10220739        A     20020508
        DE 2002-10220740     A     20020508
        US 2003-430382       A3    20030507
OS    CASREACT 139:363709; MARPAT 139:363709
RE.CNT  4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=>
=> logoff hold
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                    ENTRY        SESSION
FULL ESTIMATED COST                                 60.06        180.99

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE      TOTAL
                                                    ENTRY        SESSION
CA SUBSCRIBER PRICE                                 -4.00         -4.00

  SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 08:45:23 ON 09 JUN 2008


Connecting via Winsock to STN




Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 10:20:29 ON 09 JUN 2008
FILE 'CAPLUS' ENTERED AT 10:20:29 ON 09 JUN 2008
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                    ENTRY        SESSION
FULL ESTIMATED COST                                 60.06        180.99

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE      TOTAL
                                                    ENTRY        SESSION
CA SUBSCRIBER PRICE                                 -4.00         -4.00

=> d his

      (FILE 'HOME' ENTERED AT 08:10:31 ON 09 JUN 2008)

      FILE 'CASREACT' ENTERED AT 08:10:52 ON 09 JUN 2008
L1              STRUCTURE UPLOADED
L2          0 SEARCH L1 SSS SAM
L3         10 SEARCH L1 SSS FULL
              SAVE TEMP L3 RXNHITS/A
```

```
      FILE 'CAPLUS' ENTERED AT 08:14:56 ON 09 JUN 2008
L4          10 L3
L5      1080659 ENZYME
L6           1 L4 AND L5

=> cepacia
L7        3855 CEPACIA

=> buffer
        248192 BUFFER
         36515 BUFFERS
L8      267634 BUFFER
                 (BUFFER OR BUFFERS)

=> l7(l)l8
L9          73 L7(L)L8

=> esterif?
L10     136800 ESTERIF?

=> l8(l)l10
L11        797 L8(L)L10

=> l9(l)l10
L12          1 L9(L)L10

=> d l12 ti fbib abs

L12   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
TI    Lipase-catalyzed synthesis of kojic acid esters in organic solvents
AN    1998:797754  CAPLUS
DN    130:124920
TI    Lipase-catalyzed synthesis of kojic acid esters in organic solvents
AU    Liu, Kuan-Ju; Shaw, Jei-Fu
CS    Department of Food Engineering, Tungfang Junior College of Technology and
      Commerce, Kaoshiung, 82901, Taiwan
SO    Journal of the American Oil Chemists' Society (1998), 75(11), 1507-1511
      CODEN: JAOCA7; ISSN: 0003-021X
PB    AOCS Press
DT    Journal
LA    English
AB    Kojic acid (I) is an inhibitor of bacteria, viruses, and fungi.  I is used
      for inhibiting the browning effect of tyrosinase in the food and cosmetic
      industries.  To improve its lipophilic properties, Pseudomonas
      cepacia lipase and Penicillium camembertii lipase were used for
      catalyzing the esterification of kojic acid to synthesize kojic
      acid monolaurate and kojic acid monooleate.  These products showed a 69.5%
      inhibitory effect on tyrosinase in hydrophobic organic solvent.  The yields
      of kojic acid esters were affected by enzymes, substrates, organic solvent,
      and temperature  Lauric and oleic acids were the best substrates for
      esterification among various fatty acids tested.  CaCl2 and MnCl2
      stimulate Pseudomonas cepacia lipase-catalyzed
      esterification by 7.0%.  On the contrary, MgCl2, SrCl2, and ZnCl2
      inhibited the reaction.  The best pH of buffer for lipase
      pretreatment was pH 6.0.  Pseudomonas and Penicillium lipases can be
      reused for the synthesis of kojic acid esters.  After reaction at
      40°C for 10 d, the Penicillium and Pseudomonas lipases still
      retained 57.0% and 92.0% of their initial activities, resp.
RE.CNT  9    THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

```
=> phosphate
        597672 PHOSPHATE
        132187 PHOSPHATES
L13     648900 PHOSPHATE
                 (PHOSPHATE OR PHOSPHATES)

=> l13(1)l8
L14      63086 L13(L)L8

=> l7(L0l10
MISSING OPERATOR 'L7(L0L10'
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> l7(L)l10
L15        109 L7(L)L10

=> l14 and l15
L16          1 L14 AND L15

=> d l16

L16   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
AN    1998:768043  CAPLUS
DN    130:80431
TI    Manufacture of optically-active 2-hydroxy-1-indanones or their esters
      using hydrolases
IN    Kamishiro, Hiroshi; Mitamura, Shuichi; Hiyama, Tamejiro
PA    Nippon Steel Chemical Co., Ltd., Japan; Nippon Steel Corp.
SO    Jpn. Kokai Tokkyo Koho, 10 pp.
      CODEN: JKXXAF
DT    Patent
LA    Japanese
FAN.CNT 1
      PATENT NO.          KIND   DATE       APPLICATION NO.        DATE
      --------------      ----   --------   --------------------   --------
PI    JP 10316607         A      19981202   JP 1997-139287         19970514
PRAI  JP 1997-139287             19970514
OS    MARPAT 130:80431


=> d l16 ti fbib abs

L16   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
TI    Manufacture of optically-active 2-hydroxy-1-indanones or their esters
      using hydrolases
AN    1998:768043  CAPLUS
DN    130:80431
TI    Manufacture of optically-active 2-hydroxy-1-indanones or their esters
      using hydrolases
IN    Kamishiro, Hiroshi; Mitamura, Shuichi; Hiyama, Tamejiro
PA    Nippon Steel Chemical Co., Ltd., Japan; Nippon Steel Corp.
SO    Jpn. Kokai Tokkyo Koho, 10 pp.
      CODEN: JKXXAF
DT    Patent
LA    Japanese
FAN.CNT 1
      PATENT NO.          KIND   DATE       APPLICATION NO.        DATE
      --------------      ----   --------   --------------------   --------
PI    JP 10316607         A      19981202   JP 1997-139287         19970514
                                            JP 1997-139287         19970514
OS    MARPAT 130:80431
```
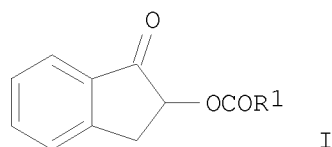
GI

I

AB   Optically-active 2-hydroxy-1-indanone (I) and/or their esters II [R1 = H,
     (un)substituted aryl, alkyl, alkenyl], useful as intermediates for drugs,
     etc., are manufactured by hydrolyzing enantiomeric mixture of II in the
presence
     of hydrolases. Alternately, optically-active I and/or II are manufactured by
     esterification of enantiomeric mixture of I with R1COR3 (R3 = halo, acyloxy)
     in the presence of hydrolases or by transesterification of enantiomer
     mixture of I with R1CO2R4 [R4 = H, (un)substituted aryl, alkyl, alkenyl] in
     the presence of hydrolases. A phosphate buffer/MeOH
     solution of (±)-II (R1 = Me) (III) was treated with L-1 (Burkholderia
     lipase) under shaking at room temperature for 3 h to give 16% (R)-I (75% e.e.)
     and 84% (S)-III (16% e.e.).